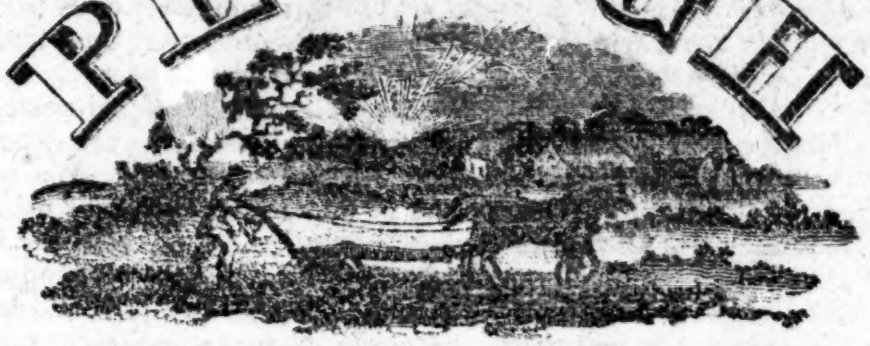
THE PLOUGH BOY.



AND JOURNAL OF THE BOARD OF AGRICULTURE.

BY S. SOUTHWICK.

"He that observeth the wind shall not sow and he that regardeth the clouds shall not reap."—BUT—"He that tilleth his land shall have plenty of bread."—*Ecclesiastes.*

Vol. III. *ALBANY: SATURDAY, APRIL 20, 1822.* No. 47.

REMARKS

ADDRESSED to the Jefferson County Agricultural Society, by the President of said Society, at their semi-annual meeting in March, 1822; and published by the request of the Executive committee of the Society.

Gentlemen,

Encouraged by the manner you received, at a similar epocha two years ago, the remarks which I was prompted to make to you by my ardent zeal and constant solicitude for the success and improvement of our happy country; I am about to address you some new remarks, with a hope that they may equally meet your approbation.

I have been endeavouring to render my absence from amongst you as useful as I could to our general interest and welfare; always intent to turn to our benefit, the results of my inquiries and observations. To communicate them to you in proper time, I look upon as a duty incumbent upon me, not only as President of your Agricultural Society—but as intimately, connected by my relations of interest with a great part of the inhabitants of the counties of Jefferson, Lewis, and St. Lawrence.

Let me first direct your most serious attention towards the culture of Hemp and Flax, which at this present period offers the greatest advantages, by the application of the machine newly invented, and now brought to a great degree of perfection. The use of improved machinery which had made such a wonderful revolution in the manufactures of cotton, had given hopes that something might be found which would equally benefit the cultivation and manufacturing of Flax. The great desideratum was to find an effectual remedy to the uncertain and destructive process as well as tedious and costly labour of rotting, a process which hitherto has in great measure discouraged, in the United States, the culture of Hemp and Flax. Among the European nations, the English and the French, so successful of late in their mechanical and chymical process for the advancement of arts and manufactures, had set their ingenious men at work, and in both countries machines where produced which give the greatest hopes of attaining the great object in view. About two years ago we began to rejoice most heartily in reading in the English publications, the narration of the most advantageous results of the new machine there employed to prepare the Flax without the long and expensive operation of dew or water rotting. The Agricultural Society of Philadelphia, animated by that zeal for public good, which has been already productive of immense advantages to the community, took immediate measures to procure as soon as possible those valuable machines in this country. However, they found in the laws of Great Britain against the exportation of new machines, an insurmountable barrier to their laudable enterprize, and happy it was, an appeal was made to the inventive genius of our own countrymen, and it was not in vain. I have seen two of those American machines and both are vastly superior to the English one, which at last found its way to the United States. I cannot, however, speak so pertinently of the merit of that of Mr. Chapman, which I saw last month in Philadelphia, in company with the curators of the Philadelphia Society, for promoting Agriculture. It was then offered to obtain the premium.—There was a second and definitive experiment made after my departure. But I have followed attentively and repeatedly, the experiments made with that of Messrs. M'Donald & Dey of the city of New-York, and for which they have obtained a Patent of 14 years, from the government, and I have no doubt that it will ensure to us the most essential benefits for Agricultural purposes. It appears to me to be in its results as superior to the English machine for Flax, as the Roller gin is to the Saw gin, for cotton.

This machine of Messrs. Mac Donald and Dey, extend its effects equally upon Hemp, its power being quite adequate to the task of completely separating the wood from the fibrous parts. They warrant that their machine, calculated to work Hemp with a three horse power, will produce 2000 pounds of Hemp per day, and a similar machine for flax, will produce 1000 of Flax. In both cases it is understood that either the Hemp or the Flax are to be worked just as they are taken from the field, and without any preparation, and that the quantity of Hemp and Flax produced, as above, is to be the neat weight when divested from the wooden part. It will not be amiss to mention here, that the offal or chaff as well as the seed will afford a very nutritious food for cattle.

Now, Gentlemen, I don't hesitate to join in opinion with many persons who have seriously reflected and calculated the probable result of this happy invention, and think that the Flax and Hemp machines will effect for flax what the cotton gin has operated for the cultivation of cotton. The soil of the greatest part of the county o Jefferson is perfectly adapted to the culture of either Flax or Hemp, and in neighbouring counties offers tens of thousands of acres favourable to that culture; therefore it will be of great importance for them to know that an acre cultivated in Flax, for instance, may upon an average produce neat benefit $12, and that he will find a vent for his plant, plucked before it is grown to seed. Those among us who turn their attention chiefly to manufactures, will have their shares too in the present improvement, for the machinery for spinning flax, does it now with greater facility than can be accomplished by the machinery in spinning cotton, as is proved by the machine now in operation near Philadelphia, the proprietor of which has stated, "the expense of attending one frame of 24 spindles, and preparing the flax (except hackling) is thirty three cents per day, and the average quantity of yarn is about 24 pounds of yarn to the spindle per day, equal to the production of one spindle for cotton per week." If I have so far in my communication paid more attention to the Flax than to the Hemp, it is because, it is but very

lately that it has been proved that the machine could be made, to work it as well as it does now, and I could not get as many documents upon this article as upon the other.—However, I think that our particular situation and richness of our soil, ought at this moment to deserve from us at least as much attention if not the preference for Hemp; it is not in every soil that it can be produced; it requires one very rich and strongly vegetative, and soils suitable for Flax, will be much more easily met with. Experience proves to us that when the price of one of our productions is by some cause or other above the common price in Europe, and particularly in England, we can dispose of our produce to a great benefit for our farmers. The present situation of politics, between Russia and Turkey, has occasioned a rise in England, upon the price of Hemp, of about 50 per cent. But was it not even for this circumstance I would yet greatly recommend the cultivation of Hemp, and insure equally the sale of this produce to a great advantage for the farmers who will cultivate it in a proper manner. To say more about it would go beyond the limits which I must observe for this communication, and I beg to refer you to the Plough Boy of the 22d of Dec. for more details upon this important subject.

I want to find place here for a few observations relative to the Sugar Maple. The experience of last spring has proved to us that we have made great improvements on that score, both as to the quantity and the quality, since you could at that time get it very tolerable at 6 cents a pound and in great quantity. Would it not be desirable that some of your enterprising inhabitants would unite to erect a manufactory to refine that sugar; we know it can be done, and that as good white sugar can be made of maple as of cane sugar. What a value would not be added to it, by the reflection upon the different manner in which these kinds of sugar are produced; the cane sugar is the result of the forced labour of the most wretched slaves, toiling under the ardent rays of a burning Sun, and two often under the cruel lash of a cutting whip.

While the maple sugar is made by the happy and free inhabitant of our forests, with only the concourse of his family, and the help of hired hands if any be wanted.

Permit me also to invite you to have before your eyes the continued and encouraging price of the Potash; there is no production of this country which has proved more exempt in its definitive results from the influence of these hard times; calculate what it costs now to manufacture it, and the price you can at any moment have for it, you will find that it gives as great a profit as in the years which preceded the unhappy changes in the price of our other produce.

Those who don't travel and who experience at home the painful effects of the hard times, as they are called, and who have suffered more or less by the rigours of the last two winters, which in almost all the parts of the world have been more severe than common: Those persons might unjustly accuse this country, and several might feel somewhat discontented were they not made acquainted with what has past and what does exist in other parts of America, so far at least as to be rendered able to make comparisons, which we are happy to feel upon the safest ground in warranting that they will all turn to our advantage.

I don't mean however to enter into details, but merely to fix the attention towards facts, which being of public notoriety in the great cities of America, and recorded in their newspapers, can be at all times investigated; I will not attempt to make a description of the cruel and unprecedent effects of hard times in other parts of the United States. Its continuance is such that we have now many among us who having had foresight and sufficient pecuniary means yet left to them to abandom those too much afflicted countries, are qualified to give here a correct idea of what they have witnessed and experienced; I might however speak of more recent facts which I had directly from the lips of travellers worthy of your greatest confidence, and who were coming from the once so celebrated countries of the west.—Their narration was truly lamentable. The sickness which prevailed most generally the two last summers in those countries, and which had been so mortal, had added yet to the mass of misery which was already afflicting them. The number of those who wanted to leave their settlements was incalculable, but very few had the means to effect their retreat.—They or their family were too deficient either in bodily strength or pecuniary facility. I was told of several facts which would appear incredible, and which I will not note here, though tho veracity of the persons make me sincerely believe them. One however I cannot omit as those who will hear, may like me have recourse to calculation to substantiate it.

A farmer of those countries who lived about twelve miles from a Store and had bad roads to get to it, loaded his wagon full with corn and occupied his whole day and that of two horses to take the corn to the Store and fetch home to his family two pounds of tea the produce of his corn. This same farmer, four years ago, thought that he was in the best of all countries, the wheat could be sold on the seaport at $2, and he could afford spending *ten* shillings to pay the expense of taking it there and have yet a handsome profit, while now the transportation would cost him almost twice the price he could get.

There is no more market at home; there is no new comers, and the old ones have more than what they know to do with.

If from the new countries of the west we go back to the most anciently settled and consolidated of the east and in the middle States; there we will find yet the severe hand of hard times extended upon a large field.—However their sufferings are not to be compared, though in many parts of them they have heen visited by sickness. The tremendous list of Sheriff's sales, and that not less threatening, *and tne low prices those sales are made at, of sales for taxes*, bear too credible witnesses of the great difficulties the farmers are experiencing in those States.

We must indeed sympathize with them, was it but for our own interest, for there is not the least doubt that this county and the two adjoining ones, within a very few years would be as populated as any part of those most settled States, if in the eastern and middle States the farmers who want to emigrate this way could obtain any thing like a reasonable price for their property. They are now infinitely more sensible than ever they were of the uncommon union of so many advantages as we possess. When the prices of produce were so great all through the United States, the peculiar privileges of our situation as to market were not so much attended to, and even our own farmers getting so easily their livelihood did not feel so much indebted to the fertility of the soil for their subsistence as they must feel now.

When the war came, the benefits we were then obtaining were attributed principally to our peculiar situation with the contending armies.

But now is the moment to prove our real strength and our incontestible advantages;—now that every one is reduced to shew their arteries, and may I be permitted to say that for the same reason that a good farmer will feel more confident in his judgement when he gives it concerning a lean horse, that when he is to prize one in the best order and quite fat, in the same way must he be more easy when he is to value the comparative advantages of certain countries in distressing times.

Yes, gentlemen, if you will truly appreciate your country, leave it for a few months and travel the most you can, see not only the countries but the persons; examine, interrogate and compare, and I warrant that you will come home perfectly satisfied, and bear the present hard times with great fortitude; you will soon resume your ordinary occupations with a new courage and a perfect conviction to be remunerated for them.

You will have found that no where the farmer can with as much ease and comfort to himself receive an equal reward for his labours. Take for instance the wheat, that great staple produce of our country, where in the United States can it be cultivated with so much advantage at all times and chiefly at this very moment when in almost all parts of the United States the farmer cannot continue to raise it without a very serious loss; calculate the expense of raising it here and chiefly in new cleared land; and you will find that the present price will give yet a profit of near 100 per cent to cultivators; for what he will raise on his land new cleared, while he will not be the loser in his old field.

The season so far has been as friendly to you as last year, your grain has been constantly covered by a sufficient quantity of snow, and while you enjoy, either for your pleasure or to carry your produce to market, all the advantages of a good and steady sleighing;—your fields of grass and of grain are protected from the injuries occasioned in the most inhabited parts of the middle and southern states, by the severity and repeated variations of the weather: to them, I attribute what I have seen in travelling from New-York to Philadelphia, whole fields of clover unrooted, and large fields of winter wheat destroyed.

Must we not then shew ourselves gratefel to the Great Dispensator of all things in Heaven and on Earth, and render ourselves worthy of the continuation of his merciful goodness by taking the greatest care of our farms; very many among us are very careless about our fences, this surest guardian of our crops and meadows, and while we consider that they have been exempt from the great drougths which during the two last summers have been so destructive in many parts of America, and that the ensuing spring is to offer them to our delighted eyes in the most encouraging state of verdue and vegetation, let us make use of this propitious moment to complete their protection. Appearances bid fair to promise to our farmers a deserved reward for their exertions and industry.

Permit me to conclude this communication, by acquainting our Society that a discovery has been made in France of certain chymical preparations, which re-implace with great advantage the use of Plaster for agricultural purposes, and can be procured cheaper even in our country. If Congress will give the desired support, we will soon have the enjoyment of the secret which appears to me very promising. Our soil, to be sure, is less in want of such a stimulous as in the older countries; but in many of our elevated fields where we choose to have clover, there is no doubt that a stimulant ought not to be neglected and would be productive of an increase which compared with the supposed cost would yet be beneficial.

CASHMERE DOWNY GOAT.

UPON THE IMPORTATION INTO FRANCE, OF THE CASHMERE DOWNY GOAT.

[Extract from a memoir read by Tessier, inspector general of sheep, before the Royal Academy of Sciences, September 13th, 1819.]

Translated for the Boston Weekly Messenger.

"The sight of these shawls, which are brought from Asia, which spread all over Europe, make a part in the presents of the sovereigns of the East, and adorn the head and waist of the rich inhabitants of those countries, gave rise to the question among naturalists, what species of animal produced the material from which such precious stuffs were made. Travellers gave no satisfactory information upon this subject. The general opinion was, that cashmeres were produced from a goat, but the particular species was not determined.—The importation which has just been made, clears up, in part, this difficulty, for these animals produced a down exactly like that of which the most rare shawls are made: I say in part, because it is possible that wool may be also employed for this purpose, or that different kinds of the goat may unite to bring the manufacture to perfection. I shall describe particularly those which I have seen upon their arrival at two of our Mediterranean ports.

"Their usual height is about twenty-five inches from the ground to the top of the back, and the length from the beginning of the tail to the head, three feet. Almost all have horns, which are straight, black, and for the most part round; those of some males' head at the extremity. The fleeces of the males, as well as females, are thick, furry, white in the majority of individuals, some brown or black, several spotted. They are formed of long hard hairs which cover the legs in part, and a very soft down. The latter is fine in proportion as their hair is long—the quality of one may be known from the other. This down grows near the skin, from which it separates and form, tufts, which can be drawn away by a comb or by the hand. Except in the case of an absolute prohibition, it appears as if our manufactures would have no interest in importing these downy cashmere goats into France, for the material may be procured in the way of commerce; it would be sufficient for them to endeavour to imitate the stuff which bears this name. M. Ternaux, so well known by his beautiful establishments, was not of this opinion. He had received by the way of Russia down enough to make some shawls; his success gave him the idea of procuring the animals on whose body nature had placed this down. The undertaking was not an easy one. He found in N. Jaubert, master of requests, professor of the Turkish language, a man of zeal and intelligence, who was not to be repulsed by obstacles, and who was much attached to his country. This gentleman had already travelled in the Levant, and could make himself understood by the different nations. He was willing to undertake the expedition. In order to obtain the protection of government, Mr. Ternaux presented him to the Duke of Richelieu, then minister of foreign affairs. This minister who acknowledged the utility of the project, made a contract with Ternaux and Jaubert, in the name of the king, by which Ternaux was to receive a premium of encouragement if the expedition succeeded. The government was to take a hundred goats at a high price. In consequence of this Jaubert left Paris in the month of April 1818, recommended by the Duke de Richelieu to the notice of the Emperor of Russia. This sovereign gave orders in his dominions, that the French traveller should be furnished with all the facilities which he needed.—Jaubert went first by Odessa, Tangarock and Astracan to the camp of General Jermoloff, under the Caucasus, taking every where information from the Boukars, respecting the Kirghiz and the Armenians who frequent and inhabit the last of these cities. He was informed that there existed among the numerous hordes of Kirkhiz, a wandering people who come into Boukaria, on the borders of the Oural, a species of goat which was almost always of a dazzling whiteness, and which bore every year in the month of June a remarkable fleece. The samples which were shown him convinced him of the conformity of this down with that which came into France by the way of Russia. This discovery was the more interesting to him as it might save his time, and a troublesome journey in crossing into Thibet, by Persia and Cashmere. He was not deceived, and in some hundred verstes from the Wolga, in the middle of the Steppes, which separate Astracan from Oremburg, he found thick tufts of the down which convinced him, that he would not find it necessary to go much farther. He had also remarked that they gave them the name of Thibet Goats, in the language of the country, when they spoke of them. He then made his purchases, buying different lots among the Kirghiz of the horde called Cara-Agagdi (the black tree) among the Kirghiz of the horde called Kaisaks, in all 1280 beasts. He directed his troop towards Tsaritzin, where he passed the river Wolga. The season became severe, and the mortality among the goats was very great. He had formed a plan of embarking them at Tungarock, but the sea of Azof was frozen. He was obliged to go along the coast with them to Theodosia or Caffa. He arrived there the 24th of December, after having already lost 283 of his animals. The 14th of February he sent in a Russian vessel, the only one he could procure, 566, together with some Astracan sheep, under the care of a French supercargo. The vessel arrived at Marseilles towards the month of April. Jaubert had preferred not to come until he could bring the second troop, which he did not wish to leave behind.

"It results from the experiment of Jaubert and Ternaux, that from 1289 goats bought among the Kirghiz, deducting all the losses which have taken place, there are at present in France 400 downy goats of Cashmere.

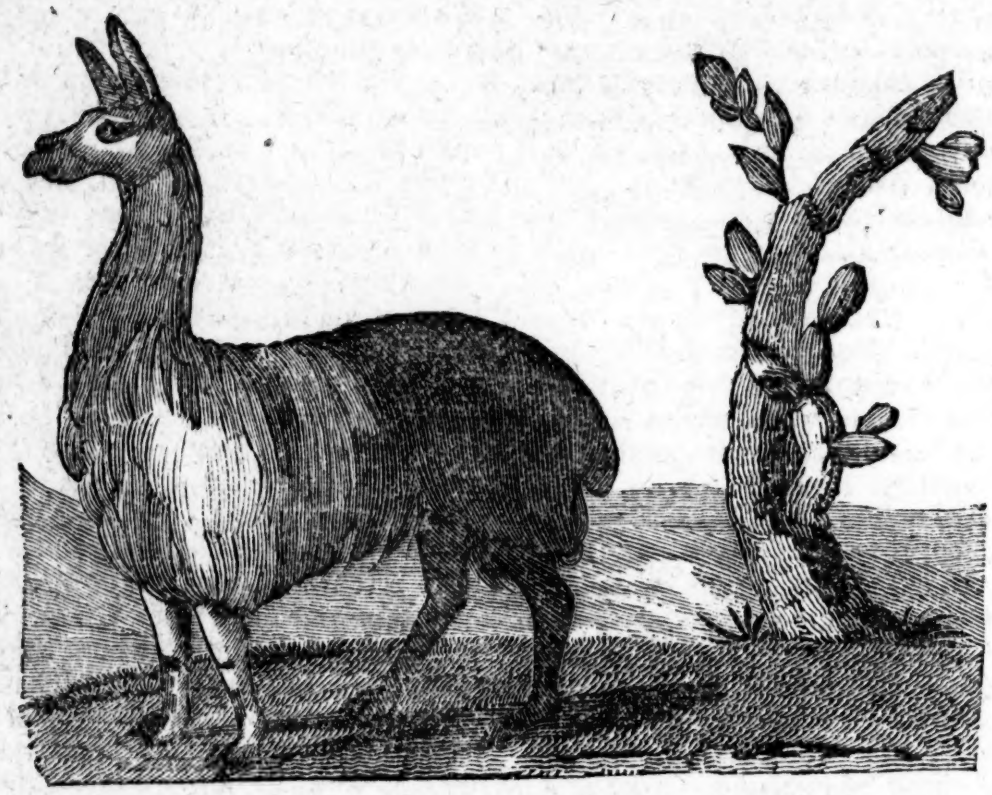
To preserve Turnips from insects.—First—To a quantity of Turnip seed, add one ounce of brimstone finely powdered, put them into a bottle large enough to afford room to shake them well together every day for four or five days previous to sowing, keeping it well corked. Secondly—Take such a quantity of clover leaves, as when bruised, will yield juice sufficient to cover the turnip seed you intend to sow, in which let it soak about twelve hours: the next day mix it with the bruised leaves, and sow all together.

THE SHEEP OF PERU

Are exceedingly valuable, and ought to be introduced into the U. States of North America.

(Continued from page 354, No. 45.)

THE ALPACA.



The stature of the Alpaca is something less than the Llama, its ordinary height is about 4 feet, but the length of the body rather more—it partakes so much of the properties of the Llama, that it is not necessary to give a more minute description than the following. Its general appearance is not so noble, but it is nevertheless a far more interesting animal.

The head of the Alpaca, resembles the common sheep more than that of the Llama, it carries its ears more erect, and the expression of its face is much softer. Its fleece is peculiarly long, and constitutes, in point of colour, the greatest variety of the whole four species of Peruvian sheep, and when the wool and hair is at its full length, he appears twice as corpulent as the others. It hangs in large flakes down the sides, rump, and breast, from 8 to 12 inches long, and in proportion to the others, it yields *as many pounds as they do ounces of wool.*

The Alpaca has a greater variety of colour than the other species, and occasionally is found a beautiful white.

Its hair is as fine and soft as that of the human head, it out tops the delicate wool that is underneath, but can easily be separated.

Among the Indian tribes of Casco, the black Alpaca is the colour they prefer, but the cinnamon colour is most valued by the traders in wool.

No quadruped in the globe, is possessed of a more interesting figure than the Alpaca, when freed from restraint, and bounding in his pasture grounds—he is grateful for the attention and caresses of his keeper, and appears unhappy at his absence. His large, black and sparkling eyes, blended with features beaming a peculiar softness, make him the peculiar favorite with man, and as in the East the greatest compliment that can be offered to a female, is to tell her that she has eyes like the Antelope; so in Peru does the Alpoca afford the finest allegories and pleasing similies in the Peruvian language.

Some of the former Incas adored the white Alpaca as a presiding divinity, which had descended from the *Hanan Pacha*, or upper world, and had come among them as a mark of special favour to Peru.

Even in the present day, although they are occasionally used as beasts of burthen, yet the Indian is careful not to overload them (their usual load being about seventy-five pounds) and when he discovers that the animal is fatigued, he will take the load from his back and carry it several leagues.

The picked wool of the Alpaca, whether dyed, or in its natural colour, produces stuffs of exquisite gloss and fineness; it is much more valuable than any of the other species of wool, except the Vicuna. We shall more particularly notice the value of the Alpaca wool in our concluding dissertation on the importance of South American wools, and we feel perfectly confident of the facility with which this animal as well as the Llama can be imported into the U. States, and that they will increase rapidly, as has been the case with the Merino.

(*To be continued.*)

FOR THE PLOUGH BOY.

Veterinary Medicine.—No. XX.

SWELLED LEGS.*

This is a most common disease affecting sometimes the fore-legs, sometimes the hinder, and sometimes both; but nine times out of ten, when it attacks the one of these only, it is the hinder ones. Swelled legs may arise from inflammation, and be phlegmonous; but the species we allude to is a kind of local anasarea, and consists in an increased deposit of fluid within the cellular membrane of the pastern and fetlocks. When long continued, it so weakens the skin as to break out in the form of cracks; and gradually the whole of the secreting capillaries of these parts throw out pus, and the disease becomes, what is called *grease.*

Causes.—The disease always originates in weakness; but this may be general over the whole system, or confined to the legs only, in consequence of the increased strength and action of some parts over balancing that of others. That debility occasions it we know, for at the close of long continued diseases that weaken much, the legs always swell, and it is reasonable to expect they should be subject to this, when we consider how far they are removed from the heart, the source of circulation; added to which, the fluids have to move in a direction perpendicularly against their own gravity; hence we cannot wonder, that the veins should by finding a difficulty in propelling their contents, cause a species of stoppage in the capillary arteries, which are thus stimulated to throw out more fluid into the cellular membrane. The absorbents may participate in this, but perhaps are the least part of the cause; for we find them in these cases in full action on the increase of stimulus; that is, a little exercise soon removes the whole swelling. Sudden changes in the temperature of the atmosphere horses are used to, or in the degree of cloathing they wear, or changes in the nature of their food, may occasion swelled legs; this they may do either by diminishing the means that keep up life, and hence producing a general debility, or by adding to the means that keep up life, by which means a general plethora ensues, and the arteries of each part become stimulated to greater exertions; and as all the exertions are increased, the balance of power being unequal here, the cause accumulates and swelled legs ensue.

Thus it is, that when horses removed from grass, or from a straw-yard, are brought at once into a hot stable, and fed highly, they become leg swelled immediately; the powers of life are unduely pushed before the parts have taken on a capacity for this increased action; hence there is a necessity for bleeding and physicing in these cases, but which are

* Blair's outlines.

much less necessary if this alteration is gradually brought on. Standing in a stable, with a full allowance of food, and little exertion, occasions it, from the same cause. Hence exercise is doubly useful, by exciting the parts to act on the vessels mechanically; and by the warmth it occasions stimulating them.—On the contrary, turning horses out to a straw-yard from full feeding, warm cloathing, and a hot stable, brings on swelled legs, sometimes by occasioning a general debility: but so much do horses improve as they approximate a state of nature, that though this is an equal change with that of removing them hastily into stables, yet they comparatively seldom suffer from this.

Standing in snow or cold water produces swelled legs, by weakening the parts, and by being unfavourable to absorption. It is very usual for horses to have their legs swelled in autumn at which period the powers of life are unequal, there is strong action in the skin to produce new hair rapidly, and hence debility ensues in the rest of the parts, and particularly in the parts remote from the seat of circulation: in short, whatever produces plethora in the constitution without proper exercise to make the waste equal to the increased secretions, may produce it by making a partial debility, and whatever brings on general debility may occasion it, as these parts may necessarily suffer more than those more within the sphere of the heart's action.

Cure.—This will not be difficult, if we consider well the cause. In removing horses from grass to the stable, with the precautions I have mentioned, it may be prevented; but when it does occur, it must be treated, by lessening the general action, and increasing the individual strength and action of the affected parts. For this purpose bleed, reduce the diet, if too full, give bran mashes, and three or four hours walking exercise every day, with two or three doses of physic; and if obstinate, a rowel in each thigh: but if it gives way it is better to avoid this. But when swelled legs occur in a horse that is thin and impoverished, feed liberally, give moderate diuretics, as prescribed in dropsy; purging in this case, though it lessens the swelling momentarily, by carrying off the watery parts of the blood, yet increases the enlargement finally by weakening the system in general. Apply friction to the legs, use gentle exercise, but not to produce weakness. The weakened vessels, having been long distended, will not easily gain their tone; they may in this be assisted by bandages: when it occurs among cart horses, hay-bands may be used for this purpose, in which some grooms aud carters are very expert. In other instances strong woollen of any kind may be made use of. But there are cases when the legs appear to become habitually enlarged; or the recurrence of the swelling is frequent or constant: in these a permanent bandage is best, produced by firing; this must be done in perpendicular lines, for by corrugating the skin, and in some measure lessening its elasticity, it becomes a bandage to the weakened vessels; but if it is done in any other than a perpendicular direction the effect is lost.

A REPORT

On the Geological Structure of the County of Saratoga, in the State of New-York; together with remarks on the nature and properties of the various soils and modes of culture, intended to illustrate the Natural History and Domestic Resources of the County.—By Dr. John H. Steel.

GNEISS.

(*Continued.*)

By far the most interesting mineral found in this rock, is the *Chrysoberyl**—it occurs in a vein of granite which passes through gneiss. This vein is situated just within the town of Greenfield, about one mile north from the High Rock Spring. The surface of the rock in which this vein occurs, is exposed for some rods; and the vein, which is from two feet to six inches in width, traverses the whole extent of the exposed surface. The feldspar in this vein is highly crystalline, and affords well defined crystals of adularia. The mica occurs in large irregular masses—it is *prismatic* and *laminated*—the latter affords some well defined rhombic crystals. Quartz is in considerable proportion, and seems to merely occupy the vacancies produced by the crystallization of the other articles. *Black tormaline*, [schorl] likewise occurs in great abundance in this vein, presenting one, two and sometimes four or five perfect sides, of a highly polished crystal, with a regular termination. Garnets are likewise found in this mass of highly crystalline substances.

In blasting the rock to obtain specimens of these minerals, the *chrysoberyl* was discovered. It occurs most frequently in triangular tables, with striated surfaces and truncated angles. It likewise presents six sided prisms, with a regular termination—they are generally of a greenish yellow colour, and translucent.

MICA SLATE.

Mica Slate occurs near and along the southern termination of the primitive region, in the town of Greenfield; a little below Fitch's Mills it forms a distinct stratification, and along the mountains to the north and northeast it rests on the gneiss, and is observed to form veins or seams in the granite. This rock exhibits fragments of an extensive stratification both on the Palmertown and Kayadarosseras mountains. Its strata are much curved—it contains garnets in great abundance, and frequently of an immense size. Foliated graphite and the oxide of iron are diffused among the layers of most of the specimens which I have examined.

SOAP STONE.

Steatite, or *Soap Stone*, occurs at or near the foot of the Palmertown mountains, in the town of Moreau. It is covered by granular lime stone, through a fissure of which the specimens which I have were obtained: they evidently belong to the variety termed *Pot Stone*. I have several specimens of the same variety, which I strongly suspect came from the same place, although they were represented to me as coming from another quarter. They were procured by some infatuated *money diggers*, and were exhibited under a pretence or belief that they contained the precious metals.

GRANULAR LIME STONE.

Granular Lime Stone occurs in the immediate vicinity of the foregoing rock, and appears to rest upon it. It is of a coarse granular structure, and in its colours and some other properties, strongly resembles the Bennington and Shaftsbury marble. It is easily worked, and when pure, receives a fine polish. Most of the specimens, however, which I have examined, contain crystals of feldspar diffused throughout the mass, in such abundance as to render it unfit for the operations of the chissel. It is probable, nevertheless, that when this locality comes to be properly explored, specimens sufficiently pure may be obtained for all the useful purposes to which marble is applied.

Sulphuret of Iron and *Plumbago*, the former in considerable masses and the latter in thin lamina, are found imbeded in this rock—they are both sometimes combined in the same specimen; which, presenting a ponderous shining mass, some of the aforesaid money diggers have represented as being a very valuable article, containing a vast proportion of silver. *Coccolite* and the sulphuret of molybdena likewise occur in this locality of granular lime stone. The coccolite consists of distinct granular concretions, forming considerable masses of a darkish green colour: the grains are translucent and nearly of the size of a pea. The sulphuret of molybdena frequently occurs in the same mass, and is frequently diffused among the grains of the coccolite. It usually exists in small lamellar masses, but occurs in some instances in six-sided tables. Plnmbago frequently occurs in the same mass, and it is necessary to have recourse to experiments in order to distinguish one from the other.

TRANSITION FORMATION.

The rocks which are distinctly marked as belonging to this class, are—

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* Crystals of this mineral were formerly brought from Brazil and Ceylon; but little was known of its original situation, until it was discovered at Haddam, in the state of Connecticut, in a granite rock accompanied by garnets, tourmaline and emerald; this was the only known locality in the United States, until it was discovered in this county. See Cleaveland's Mineralogy.

Since writing the above sentence, on looking over some specimens from the above locality of Chrysoberyl, I detected several small crystals of Emerald, of a beautiful green colour. It is, therefore, probable that this vein will, ultimately, produce the same variety of minerals as that at Haddam.

PUDDING STONE;
COARSE SILICEOUS SAND-STONE;
ARGILLACEOUS SLATE;
GRAY WACKE and GRAY WACKE SLATE;
SILICEOUS and CALCAREOUS SAND.STONE.

Pudding Stone.—This conglomerated mass of rock is found in the town of Greenfield not far from its south line, on the southeast side of the Kayadarosseras mountains, resting upon the primitive rocks. It consists of rounded pebbles of quartz, from the size of a small shot to that of a man's head, united into one common mass by a kind of coarse ferruginous sand. It extends along the mountains to no great distance, but fragments of it lay scattered in all directions, and, indeed, are found along the whole extent of the south line of the town of Greenfield, and in various other places. At present I am not acquainted with any other locality of this rock, and it appears here rather too limited in extent to be taken into consideration as one of the regular stratifications of the country; but the quantity of fragments produce evidence that this formation has been extensive: I am, therefore, induced to believe that the pudding stone of this region is the first of the transition formation.

There is a thin stratum of pudding stone a little above the falls at Hadly, which rests between strata of calcareous sand stone; but this differs materially from the other, in being composed of small pebbles, and in its stratum, which is not over six inches in thickness, while the other is more than ten feet.

Coarse Siliceous Sand-Stone forms an extensive horizontal stratum along the west part of the north line of the town of Saratoga Springs, and extends some way into the town of Greenfield. It is a coarse hard rock, resembling common quartz in its fracture, but is more loose and granulated in its structure: it is of a white colour, and when heated and thrown into water, crumbles into a fine white sand, which is much used by the country people for scouring their kitchen furniture.

Most of the stratum which I have described, is buried from six to ten feet beneath the soil, which is a stiff clay, effervescing slightly with acids. In blasting this rock to obtain water, considerable masses of *pyritous copper* were thrown out with the rock in which it is imbeded, but the water coming in rapidly prevented its being sufficiently explored.—Broken angular fragments of this rock occur in great abundance over that part of Greenfield and Corinth which lays between the mountains; and at the latter place, near the Landing, they form the uppermost stratum of the rock formation.

I have been somewhat at a loss to know where to place this formation, but from several circumstances I am confident it should be placed among the oldest of the transition class.

Argillaceous Slate appears to underlay the greater part of the county that is not included in the primitive region. It forms the bed of the Hudson to a little above Baker's Falls, opposite Moreau, and that of the Mohawk to above Schenectady. It is likewise observable in the interior of the county, at the bottom and along the shores of the lakes, both at Ballston and Saratoga, and it forms the banks of most of the streams that pass to the southward of the secondary formation, but it has not yet been observed to make its appearance between this last and the primitive region.

The layers of this rock are much curved, particularly along the southern parts of the county, and possess a considerable elevation to the N. W. but as it approaches towards the secondary rocks, to the north, its layers become straight, are evidently less inclined, and easily separate into thin plates, some of which appear suitable for *roof slate*. The seams and fissures of these layers are frequently filled with calcareous spar; and at Baker's Falls large masses of this substance are imbeded in the rock. It is extremely liable to decomposition where the surface is exposed, and in many places it breaks into regular rhombic tables, whose fractures are always parallel to their sides, evincing a crystalline formation.

Some specimens of this rock are glazed with black lead, which, when handled, soils the fingers, and, from this circumstance, some have been induced to mistake it for *bituminous shale*, a substance which probably will not be found in this county.

Large masses of *chlorite*, *milky quartz*, and sometimes *red jasper*, are likewise found either imbedded in this formation, or passing through it in the form of veins; and the sulphuret of Iron occurs sometimes in seams and sometimes imbedded in it. The decomposition of this last substance probably gives origin to the sulphurous waters which are found in this region, and likewise to the efflorescence so often met with on the sides and walls of the rock: this efflorescence is either the *sulphate of iron*, *lime*, or *alumine*, and sometimes consists of all three.

Siliceous Slate.—This appears to be imbedded in the argillite rather than forming a separate stratum: it is of a flint like appearance, possessing a concoidal fracture, and has a dark shining aspect. It occurs in large irregular masses, in the argillaceous slate, on the east side of Saratoga Lake.

(TO BE CONTINUED.)

THE PLOUGH BOY.

ALBANY: SATURDAY, APRIL 20, 1822.

TO THE PATRONS OF THE PLOUGH BOY.

Whilst the Editor held the Post-Office, his official duties prevented him from attending in person to the pecuniary concerns of this establishment. The consequence is, that the accounts have not been kept accurately; that in many cases payment has neither been made, nor demanded; in many others, it has been made, either voluntarily, or on demand, but no credit given in the books; these, therefore, are found to be in a deranged state, or rather a state of uncertainty, since the Editor frankly confesses, that he cannot determine from them what is, or what is not, due to him from his patrons, individually or collectively.

He, therefore, takes the liberty of calling, throught the medium of this notice, upon each one of his subscribers to inform him, by mail, what amount he will owe up to the first of June next, when the 4th volume commences—how much of that amount he has paid—whose receipt, if any, he has for it—and to inclose at the same time the balance that may remain due.

The Editor hopes, that there may not be one among his patrons, who will neglect to attend to this request. He is anxious to keep up this work, as well for his own as the public good; but this cannot be done without he receives all that may be due to him at the close of the present volume—the last number of which will be published on Saturday the 25th of May. A prompt compliance with this notice, therefore, is indispensable not only to the correct arrangement of the books, but to the preservation of the Institution itself.

Hitherto the Editor has entertained hopes, founded on the acknowledged utility of this paper, that it would be patronized by a legislative act. A bill for that purpose passed both houses of the Legislature of 1821—but did not reach the council of Revision in time to become a law. His Petition for public patronage, sanctioned by the signatures of from FIVE to TEN THOUSAND enlightened and independent Farmers, was renewed at the commencement of the present Session. But it has not been thought proper even to give it a hearing, notwithstanding the voice of the numerous petitioners, and the intrinsic merits of the application. This may be legislation—but it is not such legislation as a free people have a right to expect. It may suit the atmosphere of Turkish despotism, where petitions and petitioners are alike treated with contempt, and the latter frequently consigned to the bow-string of the mute, or the sword of the Jannisary, unless the Grand Turk happens to be in a good humour, when his humble vassals approach his sacred and majestic presence.—But it does not comport with the principles of

a free government—it is not congenial with the spirit of 1776—that the Legislators of New-York, the *servants* and not the *masters* of the people, should treat their constituents, who come before them with petitions, as the *Grand Turk* treats his ignorant, abject and submissive slaves!

But let us not be misunderstood. We do not blame our representatives for refusing to grant The Plough Boy Petition. But we blame them for neglecting entirely to canvass its merits—for not giving it a fair hearing—an impartial investigation—and such a decision thereupon, as might have comported with their honest views of the subject. We blame them for treating with silent contempt and neglect, the Petition of Thousands of their constituents, voluntarily preferred, clothed in respectful language, and bottomed on arguments, possessed of no small share of solidity, if not absolutely conclusive.

While we owe no thanks to our own government for encouraging this enterprise—this first attempt on the part of the press in this state, to promote the cause of Agriculture—while scarcely any of those upon whom the people have bestowed their honours, have stepped forward to cheer the labours of the Editor; the countenance and patronage of the BRITISH GOVERNOR-GENERAL OF THE CANADAS, THE EARL OF DALHOUSIE, has done more to support THE PLOUGH BOY, than all the subscriptions of all the DIGNITARIES of our State and federal governments put together! Yes, the value of this paper, in diffusing agricultural information, is duly appreciated by the *Royal Governor* of Canada, while *Republican* legislators do not deign even to enquire into its utility, although THOUSANDS of their constituents have petitioned them to extend to it the public patronage. From the *Earl of Dalhousie*, we have received the most friendly and affectionate letters, with substantial enclosures, for our present and past volumes; we have also received numerous subscriptions from Quebec and Montreal, through his influence; and we take this public method to return him thanks, not only on our own account, but on account of those enlightened farmers of New-York and the United States, who deem The Plough Boy a useful auxiliary in their rural labours. But thus far we have looked in vain, with one or two solitary and honorable exceptions, to the high places of our native land, for even a cold subscription, much less a friendly or affectionate expression of good will to the enterprise!

Still, under all these discouraging circumstances, we have determined to strip up our sleeves (having at present no official duties to perform) and endeavour, by dint of our own mechanical as well as editorial labour, to keep up THE PLOUGH BOY. To enable us to do this, however, it is indispensable, that our books be balanced by the first of June; and if, in addition to the payment of arrearages, each of our present subscribers would exert himself effectually to add one of his neighbours to our list, this step would ensure the permanency of the Institution, and afford us something like remuneration for our labour. We might then go on rejoicing in our humble path, though neglected, and even *bitterly* and *malignantly* opposed, as we have been in some instances, by certain *great*, and *good*, and *illustrious*, and *exalted Patriots* and *Politicians*, *Philosophers* and *Statesmen*, who, if they do not in all cases absolutely guide, too frequently exercise an inglorious influence upon, the destinies of the republic.

We cannot conclude, without the heartfelt expression of our gratitude, not only to our subscribers in Canada; but to those of our fellow-countrymen, and among them we count many professional gentlemen, as well as farmers, whose public spirit has induced them to patronize this work. We shall endeavour to make it worthy of their future support; and we do not despair of seeing it triumph at last over every obstacle.

S. SOUTHWICK.

ALBANY, *April 16th*, 1822.

P. S. It is hoped that every subscriber in arrear will not only pay up; but also give timely notice whether he means to continue his subscription for another year. To this point very particular attention is requested; because, if we send our first number, and perhaps the second and third, of the fourth volume, and then have a notice to stop, it puts us to the expense of printing those numbers over again, to make good our files, and preserve our volumes entire.

From the Albany Register.

NEW PAPER.

We have received from New-York, the first number of the MECHANICS' GAZETTE, by Messrs. T. R. & W. A. MERCEIN. This paper is to be principally devoted to the promotion of the Mechanic Arts; but will not be destitute of interest in other departments of intelligence. The first number is highly respectable in appearance, and contents;—and we doubt not the succeeding numbers will appear to equal advantage. It is published semi-weekly, at five dollars per annum; and we hope may meet with that encouragement which is due to it, especially from the mechanic interest, throughout the state.

The more the merrier, provided they can all live. We have received, nearly at the same time, the first number of THE MINERVA, a weekly paper, printed on super-royal quarto, a very convenient form, and excluding advertisements, at *Four* dollars per annum. This is one of the most interesting sheets we have cast our eyes upon for a long time. The Editor has divided his matter, under the several heads of—*Popular Tales—The Gleaner—Arts and Sciences—Literature—The Drama—Correspondence—The Traveller—Editorial Notices—The Record—Poetry—Enigmas, &c. Chronology.* The contents of each department correspond to the title, and afford a delectable intellectual repast. We have only to add, that we are well acquainted with the Editor, whose name, however, does not appear in the prospectus, or at the head of the paper, and know him to be well qualified by talents and industry to keep up the spirit of his work, even though unassisted by a single friend.—But we doubt not at the same time, knowing, as we do, the circles in which he moves, that he will be assisted by some of the first scientific and literary characters, both at home and abroad. We shall make extracts from the MINERVA as well as the MECHANICS' GAZETTE, in our future numbers.

DIED.—At Schodack, on the 7th inst. in the 36th year of her age, Mrs. SOPHIA WITBECK, wife of *John Witbeck*, Esq. Post-master of that place. The character of this amiable woman, whom it has pleased Divine Providence, to consign to an early tomb, may be truly and briefly pourtrayed in the language of Gray:—

"Lo! where this silent marble weeps,
A friend, a wife, a mother sleeps;
A heart, within whose sacred cell,
The peaceful virtues lov'd to dwell:
Affection warm and faith sincere,
And soft humanity were there.
In agony, in death, resign'd,
She felt the wound she left behind.
Her infant image here below,
Sits smiling on a father's wo,
Whom what awaits while yet he strays
Along the lonely vale of days?
A pang, to secret sorrow dear,
A sigh, an unavailing tear,
Till time shall every grief remove,
With life, with mem'ry and with love."

POETRY.

The following stanzas were written by a lady a few days before her death. With the inspiration of fancy and feeling, they unite the eloquence of truth, and breathe a magnanimity of soul worthy of a better fortune.

I said to Sorrow's pelting storm,
That beat against my breast,
Rage on!—thou may'st destroy this form,
And lay it low at rest:
But still the spirit, that now brooks
Thy tempest raging high,
Undaunted on its fury looks
With steadfast eye.

I said to Penury's meagre train,
Advance! your threats I brave:
My last poor life-drop ye may drain,
And crush me to the grave:
Yet still the spirit that endures
Shall mock your force the while,
And meet each cold, cold grasp of your's
With bitter smile.

I said to proud Neglect and Scorn,
Pass on! I heed you not;
Though thus unfriended and forlorn,
By you I am forgot:
My spirit, which untam'd and free
No scoffs of your's annoy,
Draws from its own nobility
Its high born joy.

I said to faithless Friendship's blow,
Strike deep! my heart shall bear;
Thou canst but add one bitter woe
To those already there:
Yet still the spirit that sustains
This last severe distress,
Shall smile upon its keenest pains,
And scorn redress.

I said to Death's uplifted dart,
Aim sure! O why delay;
Thou wi't not find a fearful heart,
A weak, reluctant prey;
For still this spirit, firm and free,
Triumphant o'er dismay,
Bright in its own eternity,
Shall pass away.

From the Minerva.

THE COAL FAMILY.

Sir, As the discovery of stone coal in the United States, where unquestionably it exists to an unlimited extent, is of great importance to the country, the following facts as to its formation, and characters, may, perhaps, not be unacceptable to those who are now engaged in exploring those valuable mines, or others who may wish information on the subject.

It is estimated, that there are no less than *seventy* different kinds of coal brought to the London market, the best of which is called *Wallsend*, from the name of the pit at Newcastle, where it is dug.

Park seems to have adopted the opinion, that the formation of pit-coal and bitumen is owing to the deposition of marine animal matter, and he thinks that the quantity of volatile alkali, which these substances yield on distillation, favours this idea. Other writers have imagined coal to be the remains of antediluvian timber, which floated upon the waters of the deluge until several strata of mineral substances had been formed; which others conceive to have been antediluvian peat continues to burn for a considerable time, exhaling a strong bituminous smell.

In some parts of England, particularly in Lancashire, this coal is found in abundance, and is there called *Cannel Coal;* a name supposed to have been given it from the circumstance of its being used by the poor as a substitute for candles, in the pronunciation of which word, the letter *d* is usually omitted.—In Scotland, it is called *parrot coal*, from its crackling, or chattering noise when burning. There is no coal which takes fire so readily, or burns with so cheerful or brilliant a flame as this. For the production of gas for lighting the streets and manufactories, it is preferred to all others; but it does not cake, and burns away very quick.

The *Anthracolite* is distinguished from other coal by burning with flame; and is composed of 54 charcoal; 33 silex; and 3 parts of other earth.

The *graphite*, or plumbago, commonly known by the name of *black lead*, is an inflammable mineral, which consists of carbon, or charcoal combined with iron, in the proportion of nine parts of the former to one of the latter. It is of a dark iron-grey colour, with a strong metallic lustre, and so soft that it is easily scattered with a knife. To the touch it is soft and greasy, and when handled stains the fingers. Its weight is about twice as heavy as water. The plumbago is never found in such large quantities as to be used for fuel. For forming lead pencils, and, when reduced to powder, polishing cast-iron stoves, it affords a considerable profit to the manufacturer.

There are many other interesting facts as to coal, which, if this is inserted in your columns, may form the subject of another communication. H.

From the same.

SMUT IN WHEAT.

Sir John Sinclair has recently announced the important discovery, that the *sulphate of copper*, or *blue vitriol*, is an *effectual remedy against smut in wheat.* In a long letter on the subject, he states, that he had been informed on the continent, that it was an antidote to the mildew; but I did not wish to raise too high the expectation of the British Farmers respecting this most *effectual remedy* against smut by representing it as a *general specific.*" But having by a variety of experiments, satisfied himself of the fact, he now felt no hesitation in communicating it to the public. The following is the mode, which he directs to be adopted, in applying this important remedy:

After dissolving five pounds weight of the sulphate of copper, or blue vitriol, in *hot* water, add as much cold water as may be sufficient to cover three bushels of wheat. Let the wheat be gradually passed through a riddle, in order that all the light grain may swim on the surface, and be skimed off. Stir the wheat repeatedly, that it may be effectually cleared of all the light grains. Let the wheat continue in the liquid for five or six hours, or it may remain even longer without risk. It should then be taken out, and thrown upon the floor. If it is to be sown broadcast, it should be crusted with lime in the usual way; but if intended for drilling, it should be stirred about for four or five hours, in *dry* weather, or double that time in *moist;* or by the use of the fanner, it will soon become perfectly dry. It may then be drilled with as much facility as grain that had not undergone any operation.

After from six to nine bushels have passed through the operation, then add one pound of the sulphate, for every three bushels, until thirty bushels have been used, when the liquor has probably become so foul, or turbid, that a fresh quantity of the preparation should be made ready.

The advantages to be derived from the use of this specific are very great. The expense is but trifling, the price of blue vitriol not exceeding from 6d. to 8d. or 18d. per pound.—Five pounds will be sufficient for nine bushels, or from 6d. to 10d. or 1s. per acre, according to the price of the vitriol, and the quantity of seed sown; and after being used, the water may be evaporated, and the remains of the sulphate will again christalize.—2. Liming is not necessary, and in many places, lime, recently slacked, cannot be had.—3. The grain may afterwards be kept in safety for some time.—4. The plant is so strengthened, that it is less liable to be lodged, and to suffer from other disorders besides smut: and—5. It is much superior in point of cleanliness, to those disgusting processes that are usually recommended for the same purposes.

It is proper to add, that the grain should be perfectly dry before the solution of the copper is applied.

FOR SALE,

HAMPTON ARABIAN.

A FIRST rate STUD HORSE, four years old the 15th June last—fifteen and a half hands high—dapple grey—a cross of the first blood English Arabian, and Naragansett breed of horses, and exhibits as much activity, and elegant symmetry of form, as any horse of his age.—If not sold by the 15th April, will be let for the season.

JOHN WATSON, jun.

East Windsor, Con. March 30th, 1822.

☞ Communications and Subscriptions for this paper, received at the Printing-Office, No. 5, Lutheran-street. All letters from abroad, directed to the EDITOR, Albany, will be duly attended to. Each volume comprises twelve months, or fifty-two numbers—the numbers are issued weekly on Saturday, and the volume commences the first Saturday in June.

TERMS.—Three dollars per annum, payable in advance.